

# SAFOAM<sup>®</sup> PN-40E

## DESCRIPTION

**SAFOAM<sup>®</sup> PN-40E** (the **N** indicates “nucleating”) is a medium temperature masterbatch of an endothermic chemical nucleating agent for the creation of a fine foam structure in thermoplastic injection molding and extrusion applications. **SAFOAM<sup>®</sup> PN-40E** improves melt tension and melt flow. It has special polymeric surfactants, which reduce cell size in direct-gas applications using hydrocarbon gases, CFC, HCFC, CO<sub>2</sub>, NO<sub>2</sub>, or any combination of the above. It is also commonly used in injection molding for the elimination of sink marks, reduction of part warpage, and for minor weight reduction. In extrusion operations, it is used for the creation of fine size cells in medium and low-density applications

## UNIQUE POWDER/CARRIER BENEFITS

All **SAFOAM<sup>®</sup>** powders are *microencapsulated* with special surfactants, which result in:

- Improved bubble stability
- Slowed moisture absorption and diffusion rate
- Improved CO<sub>2</sub> solubility rate
- Extended shelf life
- Excellent dispersion

## TYPICAL PROPERTIES

<b>Characteristics:</b>	Endothermic decomposition
<b>Total Gas Evolution:</b>	90 ± 20 ml/gram
<b>Appearance:</b>	Off-white pellets
<b>Bulk Density:</b>	0.65 ± 0.10 grams/cc
<b>Odor:</b>	Faint Odor
<b>Decomp. Temp.:</b>	110°C (230°F)

## MAIN USES

Recommended for thermoplastics that reach the decomposition temperature during extrusion or low-pressure direct gassing (Union Carbide process).

**SAFOAM<sup>®</sup> PN-40E** is commonly used to create a fine cell structure for medium and low-density foam applications. **SAFOAM<sup>®</sup> PN-40E** can be used in various applications in conjunction with gas counter-pressure and gas assist molding technologies.

## BENEFITS

- Creates a standard closed-cell foam structure
- Improves melt flow & dispersion in thermoplastics
- Improves melt strength
- In-line paintable
- Improves cycle time in injection molding
- Increases extrusion output rate
- Achieves significant weight reduction
- White foams
- Enhances surface appearance
- No pin holes
- FDA approved – safe for food contact
- pH balanced and buffered formula
- Improves process economics
- Reduces VOCs of direct gas polystyrene extrusion
- Improves post-expansion in direct gas polystyrene
- Improves flex and elongation and reduces brittleness

All active ingredients are Generally Recognized As Safe (GRAS) by the FDA. **SAFOAM<sup>®</sup>** is manufactured in accordance with applicable FDA Good Manufacturing Practices (GMPs) 21 C.F.R. Part 110.

## PACKAGING

50 lb. (23 kg.) Lined boxes

*Updated 6/12 EM*

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